Effect of Public Debt Portfolio on Economic Growth in Kenya

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Abstract—Public debt plays a critical role in any country's financial system. Public debt is used to finance both huge infrastructure development projects and it helps to bridge fiscal deficits of a country. In Kenya, high levels of external debt pose a great challenge on the economy because a large proportion of exports revenue is devoted to servicing these debts instead of being put into domestic investment thus it contributes to a reduction in the prospects of economic growth. The current study sought to determine the effect of public debt portfolio on economic growth in Kenya. The study adopted both a positivism research philosophy and an ex-post facto research design. The secondary data was for the period between 2014/15 and 2020/21. The data collected was analyzed using both descriptive and inferential statistics. STATA version 17.0 aided in data analysis. Regression results revealed that internal debt had a significant negative effect on Gross Domestic Product while external debt had also a significant negative effect on Gross Domestic Product. The study concluded that public debt portfolio has a significant effect on economic growth in Kenya. Both internal debt and external debt have a significant negative effect on Gross Domestic Product. The study recommended that there should be a separation of debt management and monetary policy objectives and accountabilities. Debt management, fiscal and monetary authorities should share information on the government's current and future liquidity needs. The government should publish regularly information on the stock and composition of its debt and financial assets which include their currency, maturity, and interest rate structure.

Keywords − Public Debt Portfolio, Economic Growth, GDP, Kenya

I. INTRODUCTION

As per the economic theory, countries are able to record economic growth when they borrow sensibly. A surge in economic growth contributes to improvement in people's standards of living [1]. Economic growth is the aggregate tangible output or factual income of an economy. It refers to an increase in real output or per capita output of an economy [2]. It was measured using the Gross Domestic Product (GDP) which implies the aggregate value of all the goods and services produced yearly in a nation. When there is a surge in GDP of a nation, it contributes to improvement in the standards of a living of the citizens of a country [3]. In order to encourage economic growth, developing countries borrow to augment what they have so as to create investment opportunities with higher ROI than that in other countries [4]. A Nation is likely to record an improvement in economic growth which helps it to repay debts [5]. However, worldwide, external debt worldwide has become an immense problem for third world countries. Public debt is important as it affects the financial system of a Nation [6]. Public debt facilitates implementation of infrastructure development projects and it helps to bridge fiscal deficits of a country [7]. Public debt may be used to fund investment as well as infrastructure improvements [8]. This aspect contributes to a surge in economic growth

which improves economic performance as well as reduction of unemployment and hence it improves the economy of a country [9]. Public debt refers to the sum of debts owed by the State [10]. It is also known as public sector debt. Public or national debt is debt borrowed by the government through treasury bills, treasury bonds and sovereign bonds [11]. It is meant to help the government address funds shortage and be able to have funds for purposes of investment [12]. Public debt portfolio in most cases is the largest financial portfolio for a Nation which is complex as well as it is comprised of risky financial structures that affects a Nations financial sustainability [13].

To address the problems associated with public debt that affects how an economy performs, governments have established sound debt structures so as to mitigate risk exposure [14]. Most governments have established portfolio benchmarks which include; desired currency composition, duration and maturity debt structure that helps to inform public debt structure composition [4]. The severity of economic crises is not only the product of government debt management policies, but it is also associated with the maturity structure and interest rate [15]. Risky debt management practices can lead to an increase in both economic and financial shocks or not [16]. Risky debt management practices can be addressed using

the following measures; lengthening of the maturities of borrowings as well as payment of servicing costs, restructuring of the amount and when the debt should be paid [17]. It can also be addressed by reviewing criteria as well as the governance arrangements in respect of contingent liabilities.

In Pakistan, public debt portfolio has witnessed various developments. Over 80% of the net borrowing locally has been through Pakistan Investment Bonds as well as Government Ijara Sukuks during first nine months of 2021/2022. Composition of domestic debt has improved to a large magnitude during the current government while there has been a decrease in short-term debt as a fraction of total domestic debt to approximately 23% by the end of March 2021 compared with 54% at end June 2018. There was no new borrowing was made from State Bank of Pakistan (SBP) in 2021 fiscal year. The government was able to repay Rs. 569 billion debts owed to SBP during the current fiscal year. The total debt paid to SBP debt was over Rs 1.1 trillion in the last two fiscal years. In order to enhance economic growth, the government came-up with various measures, the government entered into partnership with multilateral development partners who were able to assist in debt repayment.

To address the hick-ups associated with public debt in Pakistan, the government adopted a treasury single account which helped them to manage well cashflows [7]. Other measures include; extending maturity periods while keeping a close eye on both cost and risks trade-off. It also includes; the development of routine Islamic based lending program and use of maximum available concessional external financing drawn from both bilateral and multilateral development partners so as to gain from both concessional terms and conditions [18]. Public debt portfolio is mostly comprised of both external debt and domestic debt. Various countries are grappling with public debt that adversely affects economic growth. For example, in Uganda, the total public debt as at October 2021 was $20.72 billion and the external debt was $12.78 billion [19]. In Tanzania, at the end of January 2022, public debt was $37.57 billion which was an increase of $6.27 billion from the amount recorded for the same period the previous year. External debt was 75.4 percent ($28.17 billion) of the whole debt (Muinga, 2020). In Kenya, as at December 2021, the public debt was $70.97 billion which comprises of $35.66 billion domestic debt and $36.9 billion external debt [20]. In Kenya, high levels of external debt contribute to a reduction in the prospects of economic growth [21]. [22] notes that public debt exposures have remained prominent in policy debates but there has been little attention being paid to domestic debt.

II. RELATED WORK

[23], researched on the heterogeneous link between public debt and economic growth. The scholars used panel data for 115 countries over the period 1995-2016 to model the heterogeneity of the debt-growth nexus on the basis of the underlying factors that explain it. The grouped fixed effect (GFE) estimator was adopted to endogenously classify countries into groups and a multinomial logit model was used to explore the drivers of the detected heterogeneity. The GFE estimator was used to classify countries into five groups for which debt has different impacts on growth. The study established that public debt has a strong negative relationship with economic growth. A strong relationship is moderated by the quality of the institutions and the proportion of productive expenditure but it is intensified by the level of indebtedness and the maturity of the debt.

[24], researched on the effect of public debt on economic growth in Kenya. The study adopted a descriptive research design. The study used secondary data collected from the Kenya National Bureau of Statistics and the National treasury to analyze public debt. Data on economic development was collected from the Kenya National Bureau of Statistics. The data was collected using a data collection sheet. The study period was between 1993/1994 and 2014/2015. The study used MS Excel analysis tool pack to aid in data analysis. The results reveal that public debt has a significant negative effect on economic growth.

[25], conducted a panel data analysis on the relationship between external debt and economic growth. The aim of the study was to determine the effect of external debt on economic growth of selected heavily indebted poor African countries. The study was carried-out using data for eight heavily indebted poor African countries between 2011 and 2020. Data was collected on Growth rate of real GDP; initial per capita GDP, Growth rate of investment, population growth rate, trade balance (the difference between Export and Import), Net total debt service, a ratio of net debt service to Export and the ratio of external debt to GNI. The main data source for the variables was World Bank data base supplemented by IMF and respective countries statistics offices. This study adopted log of INTGDP (case for convergence), Growth rate of investment, Population growth rate and trade balance mainly from Solow's growth model; and the debt burden measuring variables: the ratio of external debt to Gross national income, debt service export ratio and net total debt service to investigate the exact relationship between external debt and economic growth. The results reveal that external debt affects economic growth by the debt crowding out effect rather than debt overhang.

[26], conducted a critical literature review on the impact of government debt on economic growth in Kenya. The theories adopted in the study include; Adolph Wagner's law of increasing state activity, the debt overhang theory, crowding out theory and the Ricardian equivalence theory. The specific objectives were to; examine the impact of government debt on economic growth, investigate the effects of macroeconomic variables on the relationship between government debt and economic growth, establish the effects of regulatory reforms on the relationship between government debt and economic growth and to

review the joint effect of macroeconomic variables and regulatory reforms on government debt and economic growth. The literature reviewed established that government debt has a significant impact on economic growth. Some of the studies shows a positive economic growth while others a negative economic growth.

[27], researched on the impact of public debt on economic growth. Evidence was drawn from Kosovo (2007-2019). The purpose of the study was to determine the impact of public debt on Kosovo's economic growth during the period 2007-2019. The variables adopted in the study included; GDP as a dependent variable and the independent variables include; internal debt (DD) and external debt (EXD) of the Republic of Kosovo. This research article is mainly based on the collection of data from the following secondary sources; annual public debt reports published by the Ministry of Finance, the reports of the Central Bank of Kosovo and the World Bank in a period of 13 years. The data collected was analyzed, processed and interpreted through econometric models. The study established that public debt has a positive impact on economic growth. This implies that low level of public debt has ensured financial stability at the national level while the use of debt to a large extent for capital investments has contributed to a positive impact on economic growth of the country during this period.

[28], examined the impact of public and private sector external debt on Portugal's' economic growth. The scholars assessed the effect of the Portuguese external debt for the between 1999 and 2019. The scholars split external debt into public and private sectors due to the different conditions that exist when accessing external funding. The study considered the public sector, private sector and total economy. The scholar adopted quarterly data so as to estimate how external debt determined variations in the channels of transmission through which external debt may affect economic growth. This study considered the share of monetary financial institutions cross-border holdings of debt securities issued by euro area (corporate and sovereign bonds). The study also considered the euro area economic growth and the German sovereign yield. The study established that external debt does not positively and significantly increase economic growth.

[29], evaluated the relationship between public debt and economic growth in Afghanistan. The study adopted secondary data that was collected from various sources such as; Ministry of Finance, treasury directorship, debt department, World Bank web page and Da Afghanistan Bank. The study period was between 2008 and 2012. The study adopted secondary data which was collected using data collection sheet. The study conducted a regression analysis, in order to establish the relationship between public debt and economic development. The study established that domestic debt is characterized by higher interest rates compared with external debt, which in most cases it is contracted mainly on concessional terms and therefore it is expensive to maintain. The study also

established that public debt has a strong positive effect on economic growth in Afghanistan. Literature reviewed led to the development of the following hypothesis statements:

H₀₁: Internal debt has no significant effect on economic growth in Kenya

H₀₂: External debt has no significant effect on economic growth in Kenya

III. METHODOLOGY

The study adopted a positivism research philosophy and an ex-post facto research design. The study adopted secondary data for the period between 2014/15 and 2020/21. It was drawn from Kenya National Bureau of Statistics (KNBS) and the National Treasury (NT) so as to analyze public debt. Data on economic growth was drawn from KNBS. The study adopted STATA version 17.0 to aid in data analysis. The following regression model was adopted in the study;

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \varepsilon$$

Where;

y is the dependent variable (Economic growth that was measured in percentage of the GDP in Kenyan shillings).

β_0 is the constant term

β_1 and β_2 are partial coefficients of GDP with respect to x_1 and x_2 respectively.

x_1 represents domestic debt (measured by the natural logarithm of the total domestic debt in Kenyan shillings).

x_2 external debt (measured by the natural logarithm of the total external debt in Kenyan shillings).

ε is the stochastic error term

Hypotheses were tested at 5% level of significance. The following diagnostic tests were conducted in the study; linearity test, normality test, multicollinearity test, autocorrelation test and homoscedasticity test. Linearity test was conducted using the scatter plot. The assumption was upheld if the residual points are scattered without an obvious pattern [30]. Normality test was conducted using Kolmogorov-smirnov and Shapiro-wilk test. The assumption was upheld if the p-value is greater than 0.05 [31]. Autocorrelation correlation was tested using the Durbin-Watson Test. The values of "d" should lie between 0 and 4 and if the value of "d" is equal to 2 then it means that there is no autocorrelation. The rule of thumb was that the values of "d" should be less than less than 1.5 and not more than 2. 5 [32]. Multicollinearity was tested using VIF. If VIF>10, it implies detection of serious multicollinearity problems. Homoscedasticity test was conducted by use of a scatter plot [33]. Homoscedasticity assumption was met if the residuals did not fan out in a triangular fashion [34].

IV. RESULTS & DISCUSSION

Public debt was found to be a key source of budget financing due to subdued growth in revenue and an

expansive budget in Kenya. Figure 1 shows that revenue-expenditure gap (deficit) between FY 2018/19 and FY 2020/21.
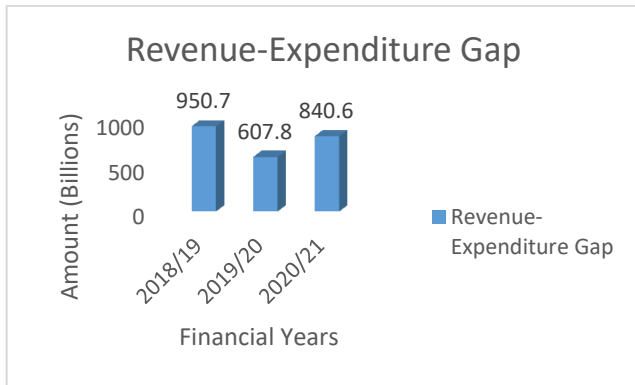

Figure 1: Revenue-Expenditure Gap

The study also conducted an analysis of the public debt growth between FY 2014/15 and FY 2018/19. Findings were tabulated in Figure 2.
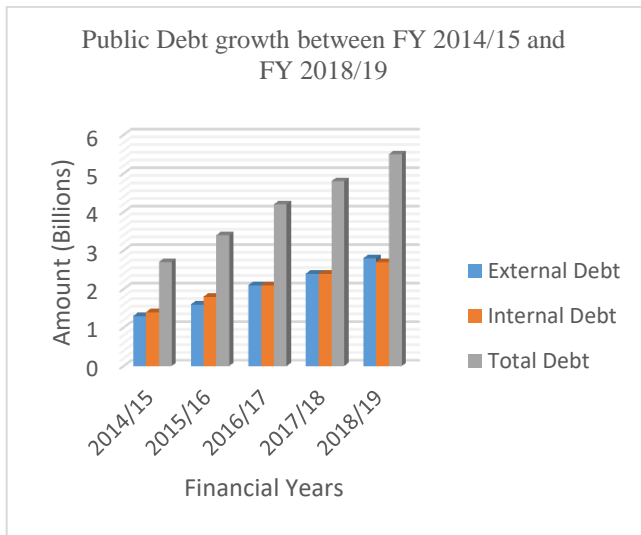

Figure 2: Public Debt Growth between FY 2014/15 and 2018/19

The external debt increased between FY 2014/15 and 2018/19. The sources of external debt include; bilateral, multilateral, external commercial banks, and suppliers' credit. The reasons for an upward trend of Kenya's external debt are; issuance of sovereign bonds, commercial syndicated loans, increase in bilateral credits, foreign exchange rate fluctuations and favorable borrowing terms (National Treasury, 2019). Internal debt increased between FY 2014/15 and 2018/19. Internal debt is drawn from issuance of treasury bonds, treasury bills and overdraft (s) from the Central Bank of Kenya and commercial banks. The government not only uses domestic debt to finance budget deficit but it is also used for financial market development. There was an upward trend of public debt between FY 2014/15 and 2018/19. The study also analyzed the Annual GDP growth rate in Kenya between 2016 and 2020. The findings were summarized in Figure 3.
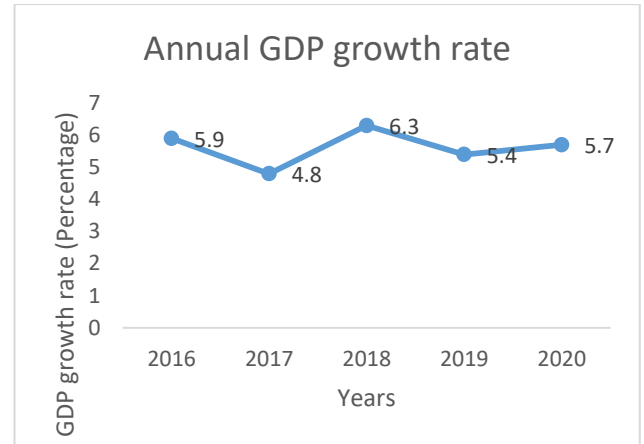

Figure 3: Annual GDP growth rate

In 2016, the annual GDP growth rate was 5.9%, 4.8% in 2017, 6.3% in 2018, 5.4% in 2019 and 5.7% in 2020. Correlation analysis was adopted to measure the strength of the linear relationship between public debt and economic growth. The correlation matrix was presented in Table1.

Table 1: Correlation Matrix

Variables		GDP	Internal Debt	External Debt
GDP	Pearson Correlation	1		.
	Sig. (2-tailed)			
Internal Debt	Pearson Correlation	-.907[*]	1	
	Sig. (2-tailed)	.000		
External Debt	Pearson Correlation	-.791[*]	-.495[*]	1
	Sig. (2-tailed)	.000	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

Internal debt had a strong negative correlation with GDP (r=-.907, p=.0000). The findings resemble that of [35], that internal debt has a strong negative correlation with GDP. The external debt had a strong negative correlation with GDP (r=-.791, p=.0000). The findings are in agreement with that of [29] that external debt has a negative relationship with GDP. Before conducting regression analysis, the following diagnostic tests were conducted. Linearity test was assessed using scatter plots. Findings were presented in Figure 4.
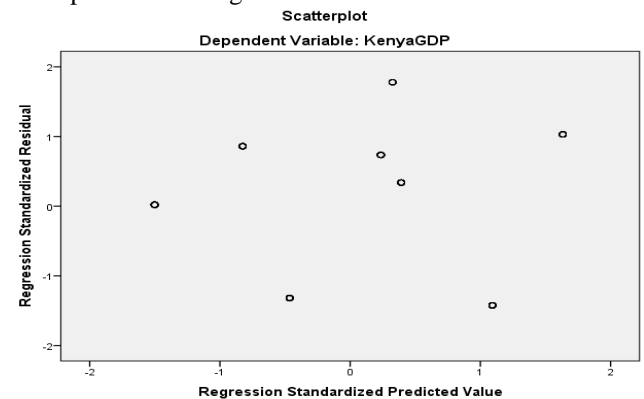

Figure 4: Linearity Test

The residuals did not scatter without an obvious pattern and therefore the assumption was upheld. Multicollinearity was verified using variance inflation factor as shown in Table 2.

Table 2: Multicollinearity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	17.411	.473		36.836	.000		
	Internal Debt	-.759	.027	-.888	-28.198	.000	.991	1.009
	External Debt	-.578	.027	-.207	-6.563	.000	.991	1.009

a. Dependent Variable: GDP

The VIF was not greater than 10, this implies that there were no serious multi collinearity problems detected. Autocorrelation of residuals was tested using the Durbin-Watson's d test. Findings were as shown in Table 3.

Table 3: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.930[a]	.865	.863	.78641	2.483

a. Predictors: (Constant), External Debt, Internal Debt
b. Dependent Variable: GDP

The d value was 2.483, this implied that no autocorrelation was detected in the study. Kolmogorov-smirnov and Shapiro-wilk test was conducted to test for normality of residuals. The findings were as shown in Table 4.

Table 4: Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
GDP	.231	2	.410	.883	2	.238

a. Lilliefors Significance Correction

Kolmogorov-Smirnov is suitable for large samples while Shapiro-Wilk for small samples [29]. A p>0.05 implies that the residuals are normally distributed. The p value was .238 implying that the residuals were normally distributed. Homoscedasticity was tested using the scatter plot. Regression standardized residual (ZRESID) was plotted against regression standardized predicted value (ZPRED) as shown in Figure 5.
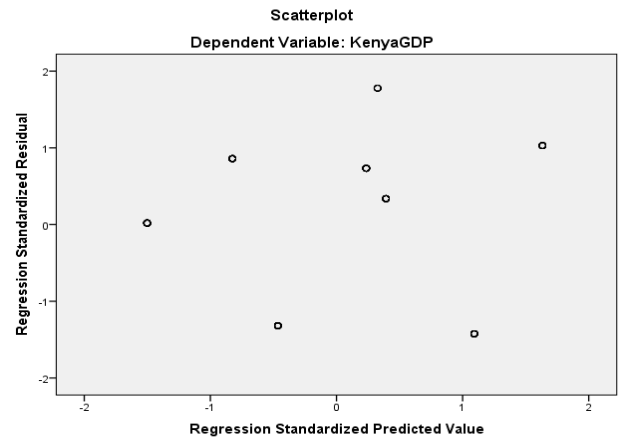

Figure 5: Homoscedasticity Test

The assumption was upheld as the residuals did not assume a triangular fashion. After all assumptions were met, the researcher proceeded further with the analysis. Model summary results were as follows;

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.930[a]	.865	.863	.78641	2.483

a. Predictors: (Constant), External Debt, Internal Debt
b. Dependent Variable: GDP

Both external debt and internal debt explained 86.3% change in GDP. ANOVA was adopted to facilitate goodness of fit test and the findings were presented in Table 3. The study recorded a p<0.05. It was evident that the model was fit for the study.

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	545.016	2	272.508	440.634	.000[b]
	Residual	84.727	3	.618		
	Total	629.743	5			

a. Dependent Variable: GDP
b. Predictors: (Constant), External Debt, Internal Debt

The regression co-efficients were used to explain the extent to which internal debt and external debt affect GDP. Findings were presented in Table 7.

Table 7: Regression Co-efficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		

1	(Constant)	17.411	.473		36.836	.000
	Internal Debt	-.759	.027	-.888	-28.198	.000
	External Debt	-.578	.027	.207	-6.563	.000

a. Dependent Variable: GDP

Internal debt had a significant negative effect on GDP (β=-.759, $p<0.05$). We failed to accept the null hypothesis (H_{01}) that internal debt has no significant effect on economic growth in Kenya. Findings resemble that of [35],[36], [37], that internal debt has a significant effect on economic growth. External debt had a significant negative effect on GDP (β=-.578, $p<0.05$). We failed to accept the null hypothesis (H_{02}) that external debt has no significant effect on economic growth in Kenya. The study is in agreement with the findings of [7], that external debt has a significant effect on economic growth.

V. CONCLUSIONS AND FUTURE SCOPE

The study concluded that public debt portfolio has a significant effect on economic growth in Kenya. The public debt portfolio majorly comprises of both external debt and internal debt. Both internal debt and external debt have a significant negative effect on GDP. The external sources of debt in Kenya include; bilateral, multilateral, external commercial banks, and suppliers' credit. An increase in external debt in Kenya is attributed to issuance of sovereign bonds, commercial syndicated loans, increase in bilateral credits, foreign exchange rate fluctuations and favorable borrowing terms. The internal sources of debt in Kenya include; issuance of treasury bonds, treasury bills and overdraft (s) from the Central Bank of Kenya and commercial banks. The government uses domestic debt to finance budget deficit and to enhance financial market development. The study was narrow in scope as there was the need for the analysis of public debt portfolio and economic growth of Kenya and other countries. Future scope for improvement includes; debt managers should convey to fiscal authorities their views on the costs and risks associated with government financing requirements and debt levels. There should be a separation of debt management, monetary policy objectives and accountabilities. Debt management, fiscal and monetary authorities should share information on the government's current and future liquidity needs. The debt management objectives should be clearly defined and publicly disclosed, and the measures of cost and risk that are adopted should be explained. The government should regularly publish information on debt composition and financial assets which include their currency, maturity, and interest rate structure. public debt management activities should be supported by an accurate and comprehensive management information system with proper safeguards.

REFERENCES

[1]. J.B. DeLong, L.H. Summers, M. Feldstein, V.A. Ramey, "Fiscal policy in a depressed economy." *Brookings Papers on Economic Activity*, pp. **233-297**, **2012**.

[2]. C.M. Reinhar, K.S. Rogoff, "Growth in a time of debt." *American Economic Review: Papers & Proceedings,* Vol.**100**, Issue.**1**, pp.**573-578**, **2019**.

[3]. B.K. Kuria, "The impact of external debt on economic growth. An empirical Investigation for Kenya." *Journal of Management*, Vol. **2**, Issue. **1**, pp. **107-113, 2021**.

[4]. A. Maji, E.B. Okon, C.O. Denies, "The relative potency of external and domestic debts on economic performance in Nigeria." *European Journal of Humanities and Social Sciences,* Vol. **27**, Issue. **1**, pp.**1415-1429**, **2013**.

[5]. M.S. Kumar, W. Jaejoon, "*Public debt and growth."* IMF Working Papers, 10/174, International Monetary Fund, **2017**.

[6]. R.M. Muinga, "External public debt and economic growth in Kenya." *Journal of Finance*, Vol. **3**, Issue. **2**, pp. **870-877, 2020**.

[7]. F, Balassone, M. Francese, A. Pace, "*Public debt and economic growth in Italy,"* Economic History Working Papers, 1,1, **2021**.

[8]. J. Weeks, "Latin America and the high performing Asian economies: growth and debt." *Journal of International Development,* Vol.**12**, Issue. **5**, pp. **625-654, 2018**.

[9]. A. Schclarek, "Debt and economic growth in developing industrial Countries," *Academy of Management Review*, Vol. **2**, Issue. **1**, pp. **779-785, 2014**.

[10]. U. Panizza, F.P. Andrea, "*Public debt and economic growth: Is there a causal effect*," *British Journal of Management,* Vol. **5**, Issue. **1**, pp. **255-262, 2015**.

[11]. O.O. Ochiel, "The relationship between public debt and economic growth in Kenya." *Journal of International Management,* Vol. **4**, Issue. **2**, pp. **55-63, 2013**.

[12]. G.K. Mukui, "Effect of external public debt on economic growth in Kenya." *Academy of Management Review,* Vol. **5**, Issue.**2**, pp. **333-340, 2013**.

[13]. A. Muhdi, K. Sasaki, "Roles of external and domestic debt in economy: analysis of a macro-econometric model for Indonesia." *Interdisciplinary Information Sciences,* Vol. **15**, Issue. **2**, pp. **251-265, 2022**.

[14]. M. Moki, "An analysis of the relationship between public debt and economic growth in Africa." *International Journal of Management Reviews*, Vol. **4**, Issue. **1**, pp. **1014-1020, 2020**.

[15]. D.W. Elmendorf, G.N. Mankiw, "*Government debt*." North Holland, **Massachusetts**, 2022.

[16]. A.M. El-Mahdy, N.M. Torayeh, "Debt sustainability and economic growth in Egypt." *International Journal of Applied Econometrics and Quantitative Studies,* Vol.**6**, Issue.**1**, pp. **25-55, 2019**.

[17]. R.T. Cunningham, "The effects of debt burden on economic growth in heavily indebted developing countries." *Journal of Economic Development,* Vol. **18**, Issue. **1**, pp. **115-126, 2013**.

[18]. D. Cohen, "Growth and external debt: a new perspective on the African and Latin American tragedies," *International Journal of Research in Management & Business Studies,* Vol. **2**, Issue. **2**, pp. **60-67, 2017**.

[19]. C.S. Adam, D.L. Bevan, "Fiscal deficits and growth in developing countries." *Journal of Public Economics,* Vol.**1**, Issue. **4**, pp. **571-597, 2015**.

[20]. M. Atieno, "The relationship between public debt and economic growth in Kenya." *Journal of Management Development,* Vol. **3**, Issue. **1**, pp. **254-260, 2017.**

[21]. M.Gómez-Puig, S. Sosvilla-Rivero, I, Martínez-Zarzoso, "On the heterogeneous link between public debt and economic growth." *Journal of International Financial Markets, Institutions and Money*, Vol. **77**, Issue. **2**, pp. **101-110, 2022.**

[22]. G.L. Kobey, "Effect of public debt on economic growth in Kenya." *British Journal of Management,* Vol. **5**, Issue. **1**, pp. **1015-1022, 2016.**

[23]. D.A. Ejigayehu, J.H. Person, "The effect of external debt on economic growth. A panel data analysis on the relationship between external debt and economic growth." *Journal of Management Studies,* Vol. **3**, Issue. **1**, pp. **751-760, 2021.**

[24]. S.M. Murungi, K. Okiro, "Impact of government debt on economic growth in Kenya: A critical literature review." *European Scientific Journal,* Vol. **14**, Issue. **1**, pp. **240-257, 2018.**

[25]. V. Misiri, F. Morina, H. Shabani, "The impact of public debt on economic growth: evidence from Kosovo (2007-2019)." *Journal of Accounting, Finance and Auditing Studies,* Vol. **7**, Issue. **4**, pp. **119-133, 2021.**

[26]. J. Silva, "Impact of public and private sector external debt on economic growth: The case of Portugal." *Eurasian Economic Review*, Vol. **10**, Issue. **4**, pp. **607-634, 2020.**

[27]. W.N. Ul-Haq, K. Habib, "An evaluation of relationship between public debt and economic growth: A study of Afghanistan." *Journal of Management,* Vol. **3**, Issue. **3**, pp. **353-359, 2019.**

[28]. K, Rinjit, "*Research methodology*." MIT Press, **United States**, 2020.

[29]. R, Kumar, "*Research methodology: A step-by-step guide for beginners*." Sage, **United Kingdom**, 2018.

[30]. K. Cr, "*Research methodology methods and techniques*." Reuters Publishers, **New York**, 2020.

[31]. J.M. Wooldridge, "*Econometric analysis of cross section and panel data*." MIT Press, **United States**, 2017.

[32]. B.H. Baltagi, "*Econometric analysis of panel data.*" (3rd ed.). Wiley & Sons, **England**, 2018.

[33]. S. Charan, "Domestic debt and economic growth In India." *Econ. Polit. Weekly,* Vol.**34**, Issue. **23**, pp.**1445-1453, 2019.**

[34]. A. Abbas, I. Christensen, "The role of domestic debt markets in economic growth: An empirical investigation for low-income countries and emerging markets." *International Journal of Management Sciences,* Vol.**52**, Issue. **3**, pp.**518-538, 2020.**

[35]. I. Adofu, M. Abula, "Domestic debt and the Nigerian economy." *Curr. Res J. Econ. Theory,* Vol. **2**, Issue. **1**, pp. **22-26, 2017.**

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